

DOMESTIC GRAINS AND OILSEEDS OUTLOOK FOR 2002<sup>1</sup>

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**Introduction**

This paper provides the domestic supply, use, and price projections for 2002/03 for wheat, corn, and soybeans and products. The first official USDA supply and use projections will be published May 10, when the National Agricultural Statistics Service publishes the first forecast of winter wheat production. Bob Riemenschneider will present the International Grains and Oilseeds Outlooks for 2002/03 at the Grains and Oilseeds session. Riemenschneider's speech provides much of the background for the trade projections in this paper. Other projections in this paper reflect the *Winter Wheat Seedings* report and analyses of the Interagency Commodity Estimates Committees.

There are numerous differences between the projections in this paper and those for 2002/03 in the Baseline, partially because the Baseline was done last October. One major difference is that the 2002/03 loan rates are assumed to be the same as for 2001/02 for the analyses in this paper. This assumption is based on a belief that most farmers and commodity analysts expect unchanged loan rates for 2002/03, allowing readers to more readily compare USDA projections with those from other sources.

Corn prices in 2002/03 are projected up around 10 cents a bushel as expanding industrial use and exports more than offset the larger production. Larger wheat and soybeans crops are also expected, with expanding use almost offsetting the larger soybean production. Wheat, however, will face even greater competition in the export market than this year and prices are projected down 5 cents a bushel from the midpoint of the February forecast price range for 2001/02.

**Planted Acreage Outlook for 2002 (Table 1)**

The outlook for 2002 features a marked increase in corn area, while soybeans and wheat plantings stay relatively stable. Combined plantings of these three major field crops are forecast to rise moderately from 2001. Normal weather is assumed which would lead to a reduction in prevented plantings from 2001, when adverse conditions disrupted planting in several areas. Market prospects for each crop are not dramatically different from a year ago, but the input situation is notably calmer. Variable costs of production are projected to decline in 2002, especially for corn. Marketing loan benefits (loan deficiency payments and marketing loan gains) will continue to influence planting decisions by augmenting producer return when prices are low. To date, these benefits have totaled about \$4.5 billion for 2001 wheat, corn, and soybean crops.

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<sup>1</sup>This paper incorporates contributions by analysts from the World Agricultural Outlook Board, the Economic Research Service, the Foreign Agricultural Service, and the Farm Service Agency.

Wheat plantings are forecast at 59.5 million acres, down slightly from the previous year. The estimate of winter wheat area was released in January and was down fractionally at 41 million acres, with hard red winter area up and soft red winter down. Likewise, little change is expected for spring wheat area in 2002, with a small increase in durum area slightly outweighed by a drop in other spring wheat acres.

Even though global and U.S. stocks have been declining, wheat prices have risen only modestly. Average farm prices have failed to advance past the \$3.00 threshold. In most areas, returns for spring wheat will not provide incentives to expand plantings, although there could be an expansion in some areas due to plantings on land where the winter wheat crop will be abandoned. Durum prospects are somewhat better than most other classes of wheat as a result of shortfall in 2001 production in Canada and the United States. This has increased prices of milling quality durum and should promote increased plantings. Spring wheat will continue to face strong competition from oilseeds for acres in 2002, and greater competition from barley in some areas, given tight supplies of malting barley in the U.S. and Canada.

Corn planted area is forecast at 78.5 million acres in 2002. This is up nearly 3 million acres from 2001, when acreage fell to its lowest point since 1995 (when there was still an acreage reduction program). Farmers backed off corn in 2001 as they confronted soaring prices and questionable availability of nitrogen, high fuel prices, and sharp increases in irrigation pumping costs due to the spike in natural gas prices. Unfavorable weather in several areas, including Iowa, Minnesota, Wisconsin, Missouri, and Texas, further constrained planting. The energy and fertilizer situation has reversed itself for 2002, with lower prices and plentiful supplies, boosting planting prospects for corn.

Another factor underlying the forecast for higher corn plantings is the expectation of favorable returns based on productivity gains, market prices, and government payments. Despite less than ideal weather, average yields in 2001 were the second highest on record. Corn prices for 2001/02 are up only modestly to date, but returns have been bolstered by marketing loan benefits, averaging 15 cents per bushel and received on 74 percent of the crop by mid-February. Many farmers in the Delta and Southeast had excellent corn crops in 2001 and they are expected to increase corn area in 2002, given indications that cotton area will be reduced.

Soybean plantings are forecast at 74.5 million acres, up slightly from 2001. The question of when the soybean expansion would finally plateau may have been answered following recent acreage revisions for the 2001 crop. The final acreage estimate for 2001 showed a year-to-year decline for the first time since 1990. The soybean acreage outlook is relatively stable because of its continued importance in crop rotations, heavy reliance on herbicide-resistant soybeans in weed control programs, and the value of marketing loan benefits. Although soybean prices are forecast to remain weak in 2002, nearly all growers will rely on LDPs that will remain large. For the 2001 soybean crop, marketing loan benefits to date are averaging \$1.24 per bushel on 90 percent of production.

There are several other factors that will also influence soybean plantings. In the Midwest, there are some indicators pointing to a slippage in soybeans planting in areas where 2001 soybean yields were disappointing or where there are concerns about disease or pest problems. Some growers are adjusting their rotations to include two consecutive crops of corn. On the other hand, some land where soybean planting was prevented in 2001 should come back. Soybeans will continue to gain in northern states where more improved varieties, including those with herbicide-resistant traits, are becoming available. Finally, some of the drop in 2002 cotton acreage will likely go into soybeans as well as corn.

Table 1. Wheat, Corn, and Soybean Planted Acreage, 1996-2002F (million acres)

	1996	1997	1998	1999	2000	2001	2002F
Wheat	75.1	70.4	65.8	62.7	62.6	59.6	59.5
Corn	79.2	79.5	80.2	77.4	79.6	75.8	78.5
Soybeans	64.2	70.0	72.0	73.7	74.3	74.1	74.5
Total	218.5	219.9	218.0	213.8	216.4	209.5	212.5

F = Forecast

Source: National Agricultural Statistics Service

### **Wheat Supply, Demand, and Price Outlook for 2002/03 (Table 2)**

**Wheat Supplies:** While there remain many questions about the number of spring wheat acres, especially durum, there also is considerable uncertainty about harvested acres of winter wheat. Table 2 shows a forecast harvested area of 49.6 million, up almost 1 million from the 2001 crop. However, 2001 harvested acres were the lowest since 1972. The harvested area in 2002 is projected using a 3-year average harvested-to-planted ratio by State. It is likely that much of the 800,000-acre increase for Texas shown in the *Winter Wheat Seedings* report will be hayed and grazed instead of harvested for grain. Dry areas in parts of the Plains States could result in reduced harvested to planted ratios. Assuming an average wheat yield of 41.3 bushels per acre, based on the average of 1999-2001 yields by State, results in production of 2,050 million bushels, up 92 million from 2001. The higher production will be more than offset by reduced carryin stocks, leaving 2002/03 supplies almost 110 million bushels below a year earlier.

**Wheat Domestic Demand:** Food use will likely increase about 1 percent. This change is commensurate with population growth and the average annual percentage change in food use since 1990. Feed and residual, at 225 million bushels, is unchanged from 2001/02.

**Wheat Export Demand:** U.S. exports in 2002/03 are expected to fall slightly below the 909 million bushels in 1985/86. The U.S. will face increased competition from expanding production in the major foreign exporters, especially the EU, and continued strong competition from exports from Russia, Ukraine, and Eastern Europe.

**Wheat Ending Stocks and Market Prices:** Total use in 2002/03 is expected to drop, but supplies are down more, so ending stocks, at 653 million bushels, are the lowest since 1996/97. However, even with the lower stocks, prices are projected down 5 cents from the midpoint of the February price range for 2001/02 to \$2.75 per bushel, due to the expected poor export showing.

The crucial question for the U.S. wheat market price outlook is “how much will China buy?”

## **Corn Supply, Demand, and Price Outlook for 2002/03 (Table 3)**

**Corn Supplies:** Corn harvested acreage for grain is forecast at 71.5 million acres based on the average harvested-to-planted relationship for crop years 1999-2001. The trend yield of 137.9 bushels per acre is based on a simple linear trend fit over crop years 1960-2001 and is below last year's yield of 138.2 and the 1994 record of 138.6. Thus, corn production is forecast at 9,860 million bushels, up more than 350 million from 2001. However, reduced carryin stocks will be offsetting and total supplies are projected at 11,416 million bushels, unchanged from 2001/02.

The number one issue for corn in 2002 is how much will corn acres expand. Some analysts forecasting corn area above 80 million acres and/or yields 140 bushels per acre, or greater. Corn prices would be much lower if acres and yields expand this sharply.

**Corn Domestic Demand:** Forecast corn feed and residual use is up 25 million bushels in 2001/02 compared with 2000/01. Pork producers are increasing the number of sows farrowing and the sector's feed use will be stronger. The dairy sector is forecast to keep milk production about the same through 2001, then increase slightly in 2002. Similarly, the poultry sector is also expected to increase production during the period. Beef production is forecast to slip 4 percent in 2001 and 2 percent in 2002. Thus, their feed needs will weaken.

### **Feed and Residual Use To Drop In 2002/03**

Corn feed and residual use in 2002/03 is projected down 100 million bushels from this year, although sorghum use will increase slightly due to higher production. The dairy sector is projected to increase milk production slightly in 2003, following a 2-percent gain in 2002. Similarly, the pork and poultry sectors are expected to increase production 1 to 2 percent in 2003. Cattle feeding, however, is projected to drop in 2003, pulling down total feed needs. A return to normal weather would reduce feedlots placements.

### **Food, Seed, and Industrial Use of Corn To Increase**

Food, seed, and industrial (FSI) use of corn in 2001/02 is forecast up 4 percent from the 2.0 billion bushels used in 2000/01. While most uses of corn are expected to increase, ethanol is up 10 percent. For 2002/03, FSI use is expected to increase 10 percent from the 2001/02 level, with corn used for ethanol production up almost 30 percent. Incentives in the Bioenergy Program will continue to help boost corn used in alcohol production, probably near plant capacities. In addition, a January 2003 switch from methyl tertiary butyl ether (MTBE) to ethanol in California is expected to sharply boost demand for ethanol. Ethanol producers are expanding existing facilities and building new plants. California refineries are modifying their facilities to be able to switch oxygenates. Corn used to make high fructose corn syrup (HFCS) in 2002/03 is projected to show little change, following a 2-percent gain this year. Corn to produce glucose and dextrose in 2001/02 is expected to about equal last year and grow slightly in 2002/03. Projected use of corn in starch production in 2002/03 is up 2 percent, following a 1-percent gain in 2001/02. Beverage and manufacturing alcohol use of corn is expected to grow about 1 percent in 2001/02 but remain unchanged in 2002/03. Corn used in cereals and other products are forecast to grow about 1 percent, near the rate of population increase.

**Corn Export Demand:** The global setting for feed grain trade in 2002/03 is more favorable than for wheat, but U.S. corn exports will continue to face strong competition from East European and South American corn and feed wheat from India, China, and the Black Sea region. Thus, only a small increase in U.S. corn exports is expected in 2002/03. Exports are projected at 2,000 million bushels, up 25 million from the 2001/02 forecast.

**Corn Ending Stocks and Market Prices:** Ending stocks are projected at 1,416 million bushels, a drawdown of 130 million bushels from the forecast 2001/02 level. The ending stocks-to-use ratio of 14.2 percent is below the 2001/02 estimate of 15.7. Thus, market prices are expected to average about \$2.10 per bushel, up from the \$2.00 midpoint in 2001/02.

### **Soybean Supply, Demand, and Price Outlook for 2002/03 (Tables 4-6)**

**Soybean Supplies:** Soybean production for 2002/03 is projected at a record 2,920 million bushels, up 1 percent from 2001/02 based on small increases in both area and yield from last year (table 4). Harvested area is projected at 73.5 million acres, up 0.5 million from 2001. The 2002 soybean yield is projected at 39.7 bushels per acre, 0.1 bushels higher than the 2001 reported yield of 39.6 bushels per acre. The projection is based on a regional trend analysis of yields for 1978-2001, which captures the impact of acreage expansion to areas outside the higher-yielding Corn Belt states that has occurred since the mid-1990's. This trend is consistent with recent yields that have increased more slowly than during the 1980's and early 1990's when shifts to narrow rows boosted yields. The trend toward narrower rows reversed in 2001 as producers began switching from 7- and 8-inch drilled rows to 15-inch planted rows to improve air circulation and reduce disease-related losses that may have slowed yield growth in recent years. Some of the decline in the rate of yield growth during the late 1990's also may have resulted from lower yields in early Roundup Ready varieties.

The larger crop and increased carryin stocks are expected to push soybean supplies for 2002/03 to a record 3.2 billion bushels, up 2 percent from last year. This would be the 7<sup>th</sup> consecutive year-to-year increase in U.S. soybean supplies.

**Soybean Domestic Demand:** Soybean crush is expected to increase to 1.71 billion bushels in 2002/03, up 30 million bushels from 2001/02. Domestic consumption of soybean meal is projected to increase at around 2 percent based on growth in poultry and hog production. However, U.S. soybean meal exports are likely to increase only slightly to 8 million short tons as foreign sunflowerseed and rapeseed production will recover from relatively poor 2001 harvests and record 2001/02 South American soybean crops will provide increased competition.

**Soybean Export Demand:** Soybean exports for 2002/03 are projected at 1.02 billion bushels, unchanged from this year's record level. Opportunities for increased U.S. exports will be limited in 2002/03 as foreign import demand growth slows from recent levels. The rapid expansion of China's imports over the past two years is over for now, increasing competition for other markets. Prospects for the second half of the marketing year will hinge in part on the outlook for 2002/03 production in South America.

**Soybean Ending Stocks and Market Prices:** Ending stocks for 2002/03 are projected at 295 million bushels, an increase of 25 million bushels from the forecast 2001/02 level. Market prices are expected to average about \$4.25 per bushel, down 5 cents from the February midpoint for 2001/02. However, the marketing loan program will continue to support producers' incomes with marketing loan benefits

exceeding \$1.00 per bushel.

Soybean Oil: U.S. soybean oil stocks are projected to decline modestly in 2002/03. Lower beginning stocks will partially offset increased production, leaving total supplies only slightly higher than in 2001/02. Domestic use is expected to increase about 2 percent, but total use is will increase only 1 percent as soybean oil exports are projected to decline. U.S. soybean oil exports will face competition from increased sunflowerseed and rapeseed production and the record large South American soybean production. In addition, global palm oil supplies remain relatively large as Malaysian production has remained strong. Although soybean oil prices are projected at 16 cents per pound in 2002/03, global import demand growth will slow as consumption in the Middle East and North Africa declines because of increased availabilities of other oils, and consumption in India shows little growth.

Table 2. Wheat: Supply, Demand, and Price, 2000/01-2002/03

	2000/01	2001/02	2002/03
		1/ 2/	2/
Area planted (mil. acres)	62.6	59.6	59.5
Area harvested	53.1	48.7	49.6
Yield (bu./acre)	42.0	40.2	41.3
Production (mil. bushels)	2,232	1,958	2,050
Beginning Stocks	950	876	671
Imports	90	95	100
Supply	3,272	2,929	2,821
Feed and residual	298	225	225
Food, seed, & industrial	1,037	1,033	1,043
Total Domestic Use	1,335	1,258	1,268
Exports	1,061	1,000	900
Total Use	2,396	2,258	2,168
Ending Stocks	876	671	653
Farm Price (\$/bushel)	2.62	2.80	2.75
		3/	

1/ Forecast. 2/ Projected. 3/ Mid-point of forecast range

Table 3. Corn: Supply, Demand, and Price, 2000/01-2002/03

	2000/01	2001/02 1/	2002/03 2/
Area planted (mil. acres)	79.6	75.8	78.5
Area harvested	72.4	68.8	71.5
Yield (bu./acre)	136.9	138.2	137.9
Production (mil. bushels)	9,915	9,507	9,860
Beginning Stocks	1,718	1,899	1,546
Imports	7	10	10
Supply	11,639	11,416	11,416
Feed and residual	5,838	5,850	5,750
Food, seed, & industrial	1,967	2,045	2,250
Total Domestic Use	7,805	7,895	8,000
Exports	1,935	1,975	2,000
Total Use	9,740	9,870	10,000
Ending Stocks	1,899	1,546	1,416
Farm Price (\$/bushel)	1.85	2.00 3/	2.10

1/ Forecast. 2/ Projected. 3/ Mid-point of forecast range.



Table 4. Soybeans: Supply, Demand, and Price, 2000/01-2002/03

	2000/01	2001/02 1/	2002/03 2/
Area planted (mil. acres)	74.3	74.1	74.5
Area harvested	72.4	73.0	73.5
Yield (bu./acre)	38.1	39.6	39.7
Production (mil. bushels)	2,758	2,891	2,920
Beginning Stocks	290	248	270
Imports	4	5	6
Supply	3,052	3,143	3,196
Crush	1,641	1,680	1,710
Seed, & residual	164	173	171
Total Domestic Use	1,805	1,853	1,881
Exports	1,000	1,020	1,020
Total Use	2,804	2,873	2,901
Ending Stocks	248	270	295
Farm Price (\$/bushel)	4.54	4.30 3/	4.25

1/ Forecast. 2/ Projected. 3/ Mid-point of forecast range.

Table 5. Soybean Meal: Supply, Demand, and Price, 2000/01-2002/03

	2000/01	2001/02	2002/03
		1/	2/
	Thousand short tons		
Beginning Stocks	293	383	275
Production	39,389	40,092	40,860
Imports	51	50	65
Supply	39,733	40,525	41,200
Domestic Use	31,687	32,350	32,950
Exports	7,662	7,900	8,000
Total Use	39,349	40,250	40,950
Ending Stocks	383	275	250
Avg. Meal Price (\$/ton)	173.60	157.5	152.50
		3/	

1/ Forecast. 2/ Projected. 3/ Mid-point of forecast range.

Table 6. Soybean Oil: Supply, Demand, and Price, 2000/01-2002/03

	2000/01	2001/02	2002/03
		1/	2/
	Million pounds		
Beginning Stocks	1,995	2,877	2,535
Production	18,434	18,730	19,210
Imports	73	78	85
Supply	20,502	21,685	21,830
Domestic Use	16,219	16,750	17,100
Exports	1,406	2,400	2,300
Total Use	17,625	19,150	19,400
Ending Stocks	2,877	2,535	2,430
Avg. Oil Price (\$/lb.)	0.1415	0.1525	0.1600
		3/	

1/ Forecast. 2/ Projected. 3/ Mid-point of forecast range.